

IN THE CLAIMS:

1-26. (Cancelled)

27. (Currently Amended) A method for coding a quantization matrix in which each component takes a value ranging from 1 to 255 with a picture coding apparatus, said method comprising:

calculating a difference value between a value of an I-th component and a value of an (I-1)th component in the quantization matrix;

determining an offset value as +256 when the difference value is smaller than -128;

determining the offset value as -256 when the difference value is equal to or greater than +128;

adding a determined offset value and the difference value; and

coding a result of said adding.

28. (Previously Presented) The method for coding a quantization matrix according to Claim 27, wherein the result of said adding is a value ranging from -128 to +127.

29. (Currently Amended) A method for decoding a coded quantization matrix with a picture decoding apparatus, said method comprising:

decoding a coded stream into a difference value ranging from -128 to +127;

adding together a value of an (I-1)th component in the quantization matrix, the difference value, and 256; and

calculating a remainder by dividing the result of said adding by 2 raised to 8-th power to obtain the value of an I-th component.

30. (Previously Presented) The method for decoding a coded quantization matrix according to Claim 29 wherein said decoding of the coded stream includes:

counting the number N of subsequent zeros from the beginning of the coded stream;

reading one bit of value one subsequent to the N number of zeros and N-bits subsequent to the one bit of value one; and

obtaining, as to the different value, a value corresponding to the N-bits.

31. (Previously Presented) The method for decoding a coded quantization matrix according to Claim 29, wherein said decoding of the coded stream is finished when the obtained value of the I-th component is zero.

32. (Previously Presented) The method for decoding a coded quantization matrix according to Claim 29, wherein the result of said adding is a positive value.

33. (Previously Presented) A coding apparatus which codes a quantization matrix in which each component takes a value ranging from 1 to 255, said apparatus comprising:

a subtraction unit operable to calculate a difference value between a value of an I-th component and a value of an (I-1)th component in the quantization matrix;

an offset value determination unit operable to determine an offset value as +256 when the difference value is smaller than -128, and to determine the offset value as -256 when the difference value is equal to or greater than +128;

an addition unit operable to add the offset value and the difference value; and
a coding unit operable to code a result of said adding.

34. (Previously Presented) An apparatus for decoding a coded quantization matrix, said apparatus comprising:

a decoding unit operable to decode a coded stream into a difference value ranging from -128 to +127;

an addition unit operable to add together a value of an (I-1)th component in the quantization matrix, the difference value, and 256; and

a calculation unit operable to calculate a remainder by dividing a result of said adding by 2 raised to 8-th power to obtain the value of the I-th component.

35. (Previously Presented) An integrated circuit for use in a decoding apparatus which decodes a coded quantization matrix, said integrated circuit comprising:

an operation unit operable to:
decode a coded stream into a difference value ranging from -128 to +127;
add together a value of an (I-1)th component in the quantization matrix, the difference value, and 256; and

calculate a remainder by dividing a result of said adding by 2 raised to 8-th power to obtain the value of an I-th component which is an integer equal to or smaller than 255.

36. (Currently Amended) A non-transitory computer readable recording medium for storing a program, which is used in a computer, for decoding a moving picture, said program causing a computer to execute steps for decoding a coded quantization matrix, wherein said steps include:

decoding a coded stream into a difference value ranging from -128 to +127;
adding together a value of an (I-1)the component in the quantization matrix, the
difference value, and 256; and
calculating a remainder by diving a result of said adding by 2 raised to 8-th power
to obtain the value of an I-th component which is an integer equal to or smaller than 255.

37. (Cancelled)